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EXAMINER

AMINI, JAVID A

ART UNIT	PAPER NUMBER
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2672

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,037

Applicant(s)

MATTHIES, DENNIS L.

Examiner

Javid A. Amini

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-12, 26-28 and 31-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Response to Arguments

Applicant's arguments filed 1/31/2005 have been fully considered but they are not persuasive.

The following paragraph is copied from office action dated 11/17/2004, because Applicant did not provide any comments regarding possible amendment to claim languages.

[The following paragraph is the Examiner's analysis in respect to claim invention in light of specification. Applicant on pages 2 –3 of the specification lines 21-23 and 1-4 respectively discloses an existing problem and a solution. **The existing problem is:** *the prior art's large displays are not very portable. Because of their large size, it may be difficult to deliver the displays to particular site. Since they must be custom manufactured, there is little flexibility in the size of the display after original assembly. **The solution to the existing problem is:** there is a need for large area displays that are more adaptable.* The underlined terms are missing from claim invention.]

Applicant on page 5 of remarks argues the claim 1 calls for tiles that include alignment tabs and tiles that include alignment grooves. And no such structure is provided in the cited reference. The cited reference has tiles, which are tab free. They have only grooves.

Examiner's reply: In respect to broad language in claim 1, and in order to be capable of being accomplished the existence of tabs and grooves without exaggerating, Examiner interprets fig. 11 of the reference as a one tile. Applicant does not specify the shape of the tabs and grooves in the claim invention; therefore, from fig. 11 Examiner considers number 14 as a tab, and by incorporating fig. 9 of the reference that illustrates four tiles connected to each other. The other

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tile with a groove can be connected to tile in fig. 11. The groove clearly shown as a number 130.3 in fig. 22. Note: the claim covers any type of shape.

Second Examiner interpretation: in figs. 11 and 12 items 222 (as a tab) and 217 (as a groove or notch) clearly illustrate them, and the reference illustrates in figs. 9 and 22 another type of tab and groove, see in fig. 9 item 14 (considers as a tab) and in fig. 22 item 130.3 (considers as a groove or notch). The alignment grooves or alignment tabs are inherent because each display module item 12 in figs. 8 and 9 mounted on the mounting track, see also col. 6 lines 60-67.

Examiner's suggestions: Applicant should be amending the claim language toward the invention. For example: There are possible languages regarding last line of claim 1 that may overcome the reference are: "... includes alignment v-shaped grooves to align ..."

Applicant on page 5 regarding claim 26, argues the reference does not camouflage the appearance of the gaps between adjacent tiles.

Examiner's reply: The cited reference in fig. 2 illustrates a surface pattern to camouflage the gap between adjacent tiles. See fig. 2 of Nicholson et al illustrates a distance d1 between adjacent pixels. The display modules are configured to also have a distance d2, which is substantially the same as d1, as a distance between adjacent pixels in adjacent modules.

Applicant on page 5, regarding claim 31 argues the reference is missing the structure called mullions.

Examiner's reply: Mullion is "a vertical member". Applicant specifies on page 7 lines 9-16 that a mullion may be positioned between adjacent tiles in some embodiments. The mullion may have a width that corresponds to the width of a black line. In particular, the distance between pixels may correspond to the width of the mullion. This may contribute to ensuring that a uniformly

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contrast enhancing pattern of black lines results which facilitates the generation of a seamless image. The reference in fig. 32 illustrates a vertical or horizontal member (see number 414) that may be positioned between adjacent tiles.

Examiner's suggestions: Applicant should be amending the claim language toward the invention. For example: There are possible languages regarding last line of claim 31 that may overcome the reference are: "mullions to fit with the upper surface atop a tile and the prong engaging the interface between adjacent tiles".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 11-12, 26 and 31-32 rejected under 35 U.S.C. 102(e) as being anticipated by Nicholson et al. (hereinafter referred to as Nicholson).

1. Claim 1.

The size and the weight of a tile are the most important parameters of being portable, since Applicant does not specify at least size and weight of a tile. The reference Nicholson applies to following claim language: "A large area display comprising: a first structural plate; and a first and second tile connectable to said plate, said tiles including image generating pixels, wherein one of said tiles includes alignment tabs and the other said tiles includes alignment grooves to align the first tile relative to the second tile." Nicholson in abstract discloses that each module

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having a display side with a rectangular screen portion, the screen portion having transparent portions with pixel elements positioned behind said transparent portions and within said module. Each module has the pixels arranged in a first matrix pattern and sufficient in number to provide alphanumeric characters and portions of characters of adjustable size of at least 6 inches. Each module having a bit map memory and being individually addressable with respect to other modules. The modules are arrangeable in a rectangular matrix on a support structure without a sign screen enclosure and with the screen portions of the modules defining a sign screen. The screen size reconfigurable by adding or subtracting display modules. In fig. 11 illustrates the tabs 222, and in fig. 12, 217 the groove. Examiner refers Applicant to see the combination of fig. 11, 222 (the tabs), 216 (the jumper) and fig. 12, 217 (the groove or notch) of the reference Nicholson et al.

Nicholson in fig. 2 illustrates a gap between two modules (tiles) d2 that is the same distance of two pixels. Examiner's comment: In fig. 9, the mounting track 14 can be considered as a tab to fit to the groove or valley of next module, see in figs. 10 and 22. 130.3. in fig. 22 spacer 120 may be molded of a colored, light absorbing plastic having an edge portion 130.3 to fit over mounting track 14.

2. Claim 2.

"The display of claim 1 including a set of fasteners on said first and second tiles, said fasteners fastening said first and second tiles to said first structural plate", Nicholson aligning a fastener hole 224 in fig. 12.

3. Claim 3.

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“The display of claim 2 wherein said fasteners include threaded pins, said plate including holes to receive said pins, said fasteners adjustably position said tiles relative to said plate”,

Nicholson illustrates in figs. 9 and 12 step 224.

4. Claim 4.

“The display of claim 3 wherein the hole in said plate is of substantially greater diameter than the diameter of one of said pins”, the step is inherent because in order to fit the pins or screws in the holes, they must have different diameters.

5. Claim 5.

“The display of claim 4 including a pair of locking nuts, one on each side of said plate”,

Nicholson in figs. 31 and 9 illustrates a pair of locking nuts, one on each side of said plate

6. Claim 6.

“The display of claim 5 including at least two pins on each tile”, see rejection of claim 5.

7. Claim 7.

“The display of claim 1 wherein each tile may be adjusted in a plane parallel to the plane of said plate and inwardly and outwardly with respect to said plane”. The specification does not support how much each tile may be adjusted inwardly and outwardly. Applicant on page 6 line 21 in the specification discloses, “this adjusts the amount of extension of the pin outwardly from the structural plate”, but Applicant silences about how much of extension of the pin consider in the invention? Examiner’s uncertainty: If one tile adjusted inwardly and the next tile adjusted outwardly by for example: 5”, what happens to the alignment tabs and grooves or the gaps between the tiles. Also the reference Nicholson in fig. 9 illustrates that all modules adjusted in a plane parallel to the plane of plate. And also Nicholson in figs. 12 and 17 illustrates step 224 for

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adjusting the modules. It is not clear to the Examiner what does applicant tries to improve over the prior art by using the terms inwardly and outwardly.

8. Claim 11.

“The display of claim 1 including a second structural plate and a plurality of tiles connected to a first and second structural plates, said first and second structural plates being adjustably securable to a third structural plate”, Nicholson in figs 8-10 illustrates first and second and third structural plates.

9. Claim 12.

“The display of claim 11 including a plurality of tiles connected to first and second structural plates and a plurality of first and second structural plates coupled to a third structural plate to form a large area display”, Nicholson in figs 8-10 illustrates first and second and third structural plates.

10. Claim 20.

“A method comprising: securing a plurality of display tiles to a plurality of first structural plates to form modules; and securing a plurality of modules to a second structural plate to form a large area display”, See rejection of claim 1.

11. Claim 21.

“The method of claim 20 including adjustably securing said plurality of tiles to first structural plates”, Nicholson illustrates in fig. 9.

12. Claim 22.

“The method of claim 20 including adjustably securing said modules to said second structural plate”, Nicholson illustrates in figs. 16 and 23.

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13. Claim 23.

“The method of claim 20 including threadedly fastening said tiles to said first structural plates”, Nicholson illustrates in figs. 16 and 23.

14. Claim 24.

“The method of claim 23 including threadedly fastening said modules to said second structural plate”, Nicholson illustrates in figs. 16 and 23.

15. Claim 25.

“The method of claim 20 including securing said tiles to said first structural plates so that the position of one tile may be adjusted relative to another tile in three dimensions”, Applicant uses a term in this claim “tile in three dimensions.” The specification does not support the term “tile in three dimensions”. However the reference Nicholson illustrates in figs. 11 and 12.

16. Claim 26.

“A large area display comprising: a plurality of tiles arranged in an array with gaps between adjacent tiles; and each of said tiles having a regular pattern of surface features defined in a surface of said tiles so as to camouflage the appearance of the gaps between adjacent tiles”, The step of claim 26 is inherent because, Nicholson et al in fig. 2 steps d2 and d1. The display modules are configured to have a distance d2, which is substantially the same as d1, as a distance between adjacent pixels in adjacent modules of the reference Nicholson et al. As Applicant similarly discloses in specification page 7 lines 9-16.

17. Claim 31-32.

The step of claim 31 is inherent because, Nicholson et al in fig. 2 steps d2 and d1. The display modules are configured to have a distance d2, which is substantially the same as d1, as a distance

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between adjacent pixels in adjacent modules of the reference Nicholson et al. As Applicant similarly discloses in specification page 7 lines 9-16.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 and 27-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Nicholson et al. and further in view of Kitai.

18. Claims 9 and 10.

“The display of claim 1 including mullions to fit over the gaps between said first and second tiles”, Nicholson et al in fig. 2 steps d2 and d1 illustrate the display modules are configured to have a distance d2, which is substantially the same as d1, as a distance between adjacent pixels in adjacent modules of the reference. However, Nicholson does not explicitly specify mullions, however Kitai discloses in (col. 2, lines 23-27) that provides an EL module, instead of mullion, which significantly reduces the gap between the light emitting display elements and the edge of the substrate thereby facilitating tiling of multiple EL modules.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Kitai into Mazurek in order to improve light collection from the pixels, and more important part of this motivation is: this type of structure avoids the need for

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edge connections and edge sealing (see Kitai, col. 2, lines 4-12). Plastic lenses were bonded to the viewing side of substrate.

19. Claims 27-28

Applicant claims the surface profile features and the region above the gaps are v-shaped.

Nicholson et al in fig. 32 steps 467, 470 and in fig. 22 step 130.3 illustrate the surface profile features in a different shape other than v-shape, (Examiner comments: using different surface profile features is just for supporting the tiles), but Nicholson et al in col. 18 lines 10-32 teaches in figs. 30-34, the display modules 416 are connectable to the support member 415 by compression clips 442. Preferably, the compression clip 442 comprises a spring-loaded latch 444 with a locking arm 446 adapted to engage the support member 414. However, any other equivalent compression clip, which tensions the display module 416 against the support member 414, could be employed. Nicholson et al do not explicitly specify the v-shape. Thus, the prior art suggests in fig. 2 steps d2 and d1 illustrate the display modules are configured to have a distance d2, which is substantially the same as d1, as a distance between adjacent pixels in adjacent modules of the reference, merely camouflage the gaps between the tiles would be presumed to be well within the level of ordinary skill in the art at the time the invention was made. The difference between the prior art and the claimed invention is simply a rearrangement of surface profile features.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JEFFERY A. BRIES
PRIMARY EXAMINER

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